



High-speed makes it yours.

Simply press the shutter button and the camera records at 30 images per second.*1

Now you can record action that is invisible to the naked eye and play it back in ultra slow motion. Image Size FC100, FS10: 224 x 64 pixels F1: 336 x 96 pixels FH20: 224 x 56 pixels

Movies can be played back on the big screen of a TV in beautiful high-definition. Image Size: 1280 x 720 pixels at 30 frames per second On the F1, Full HD Movie records 1,920 x 1,080 pixels at 60 fields per second.

Shoot snapshots and movies just like these!

Precisely the moment you want



A fleeting expression



A moment too precious to forget



High-speed

High Speed Anti Shake*3

Minimizes image blur for beautiful images every time.

Even when shooting without a tripod, the camera shoots multiple Ultra High-speed CS images and then combines them into a final image in a way

that virtually eliminates image blur due to hand movement, even when shooting with zoom.





High Speed Night Scene*4

Virtually automates setup for difficult night scenes.

High-speed Technology even helps to take much of the guesswork out of night scene photography. When held by hand, the camera activates CMOS

Shift Stabilization*5 for beautiful night images with minimal blur.



Prerecord Continuous Shutter

Capture precisely the instant you want.

Prerecord CS continually pre-records Ultra High-speed CS images. Pressing the shutter button saves the pre-recorded images followed by newly recorded real-time images. Never again miss that special moment because you were late pressing the shutter button.



Slow Motion View*6

View recorded images at your leisure.

30 Continuous Shutter images*7 recorded by the camera scroll on the monitor screen for viewing. When the one you want to keep is displayed, press the shutter button to save it. It's the perfect way to ensure you never miss a special moment.

High Speed Best Selection *8

Auto selection of the best image out of a series of CS images.

After a series of images are recorded, the camera automatically eliminates those that are blurred, and those in which people are blinking or not smiling, and selects the best of the lot. This feature can be used even if the shot includes more than one person.

^{*1.} Maximum. 60 images for the F1, 40 7-megapixel images or 30 8-megapixel images for the FH20. *2. Maximum. 1200 fps maximum for the F1. *3. F1 comes with Digital Anti Shake *4. Not available on the F1. *5. Not available on the FS10. *6. Not available on the FH20. *7. The F1 can record up to 60 images (two seconds). *8. Not available on the F1. FH20. • CS = Continuous Shutter



30 images per second at the press of a button. Two High-speed compacts.



I 30 image-per-second Ultra High-speed Continuous Shutter

11,000 fps High-speed Movie (maximum) | HD Movie Recording | CMOS Shift Stabilization*1

FS10

	(1111)	CARG ETTO
30n=	-	HIE 20704
EXILIM	CXILIM	EXILIM

• GRAY FX-FS10GY • BLUE FX-FS10BF • WHITE FX-FS10WF

	Megapixels	Optical Zoom	LCD	Battery Life	BEST SHOT	
FC100	0.1	5 x	2.7"	300*2	21	
FS10	7.1	3 x	2.5"	160*2	Z	



by a single-lens reflex camera. The ultimate High-speed camera.



1cm Super Macro I 40 image-per-second Ultra High-speed Continuous Shutter I 1,000 fps High-speed Movie

26mm Wide-angle Lens &

(maximum) I HD Movie Recording

120x Optical Zoom

I CMOS Shift Stabilization

Wide LCD Large LCD Battery Life BEST SHO F1 FH20 20_x 26mm 3.0"

FH20



Ultra High-speed Continuous Shutter

1,200 fps High-speed Movie (maximum)

I 12x Optical Zoom

160 image-per-second

| Full HD Movie Recording

I CMOS Shift Stabilization

^{*5.} BEST SHOT recording not supported during movie recording

[•] Screen and printed images shown in this catalog are simulations for explanatory purposes only. Actual images may appear different from those shown here.

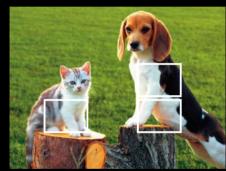
^{*1.} Not available on the FS10. *2. Approximate; CIPA standards. Normal screen brightness (based on CASIO data) *3. Converted to 35 mm film format. *4. Approximate images; CIPA standards. Normal screen brightness (based on CASIO data); Using Panasonic LR6 (XW) (LR6 alkaline) batteries. Number of images becomes approximately 400 when using SANYO eneloop HR-3UTG (rechargeable NiMH) batteries.



New functions enabled by ultra high-speed processing

Advanced Auto Focus system that automatically detects subjects and adjust focus points accordingly.

Simply aim the EXILIM and it automatically analyzes the composition of the subject, and then dynamically adjusts the position, size, and number of focus frames on the screen. Since the camera automatically arranges focus frames, there is less chance of an image being out of focus. Any human faces the camera detects in the image are given priority when assigning focus frames.



Separate focus frames appear if multiple subjects in different locations are detected.



Small subjects are enclosed by small focus frames.



EXILIM automatically positions focus frames according to image conditions.



With standard AF, the camera either side are



EXILIM detects subjects and positions focus rames in the optimum cations.

Capture landscapes in all of their unforgettable natural color and beauty.

This new feature enhances the hues in the image that make the strongest impression on the human mind in order to create landscapes that are amazingly realistic and clear. Vivid Landscape also performs minute touch up of the image, which enables never-before-possible localized color saturation for truly dramatic landscape images.

Vivid Landscape OFF





Contrast is adjusted to minimize the effects of mist in a landscape scene. The result is a clear image that appears as if it was shot under clear conditions.



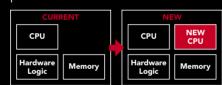
. Screen and printed images shown in this catalog are simulations for explanatory purposes only. Actual images may appear different from those shown here.



Improved image quality made possible by ultra high-speed processing

What are the main features of EXILIM Engine 4.0?

A multi-CPU configuration enables amazingly fast image processing speeds. A new type of CPU performs image analysis and processing at high speeds without putting any load on the camera system, for a totally new level of image data processing without sacrificing any other performance.



Are the advanced new functions also functions that were made possible only by EXILIM Engine 4.02

Intelligent AF uses information about the composition of an image and its color distribution, along with a wealth of special image information accumulated independently by CASIO to perform high-level image processing. This allows the EXILIM to intuitively determine the type of image

being shot. The image recognition process applies the very same process used by the human brain. The EXILIM then uses the image analysis results to determine the location, size, and quantity of the required focus frames, which are updated dynamically on the screen, for perfect images virtually every time. None of this would be possible without the new EXILIM Engine 4.0.



What is the relationship between image processing speed and high quality imaging?

High processing speed is essential for high-level image analysis and processing. When you shoot with the camera's Backlit Scene Shooting feature, for example, an image is first divided into a maximum of 1,024 areas. Each area is then analyzed in order to determine the local contrast characteristics across the image. Next, the image is successively divided

according to a number of different patterns for further analysis, and the data obtained is combined to determine the ideal level of enhancement required for each individual pixel. Thanks to ultra high-speed processing, high-contrast subjects are not overexposed and brighter, more natural details become visible in shaded areas. Color information is also referenced in addition to contrast, for color blue skies and green foliage colors with gradation just as it is perceived by the human eye. All of this without loss of color depth, which is often a problem when shooting such subjects.

How does the multi-CPU configuration contribute to EXILIM's ability to shoot faces so beautifully?

When EXILIM detects a human face, it automatically optimizes skin brightness and contrast centered on the face, which results is great looking faces in the image. A Make-up Mode makes it possible to record eyelashes in sharp detail, and removes smudges and age lines from the skin while retaining its natural qualities. The Make-up Mode also softens facial shadows, just as if you were shooting with reflector panels. The complex image analysis and high-level

image processing required to do all of this would be impossible without the multi-CPU configuration.



What kind of performance can I expect when trying to shoot high-quality images with high-sensitivity?

EXILIM Engine 4.0 allows dramatically improved noise filtering capabilities that contribute to higher image quality. With previous engines, night scenes were shot using high sensitivity along with high-frequency digital noise filtering, but filtering of low-frequency digital noise, which causes flat areas to appear murky, could not be performed. The New EXILIM Engine 4.0 now makes it possible to filter low-frequency noise. The multi-CPU configuration enables high-speed noise filtering that minimizes noise in the low band. At the same time distorted colors that tend to be generated in dark areas are suppressed, which maintains resolution for beautiful images.





Go on a 10-day trip*1 without a battery charger!





One Charge

images

SILVER_EX-H10SR



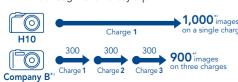
 BLACK PINK FX-H10BK FX-H10PK



Long Battery Life

1000 snapshots*2 on a single charge

EXILIM original battery technology delivers battery life that's heads-and-shoulders above the rest. Enough power to shoot 1000 images on a single charge,*2 which is enough for a 10-day trip.*1





24mm*4 Wide-angle Lens

Capture wider expanses of the background.

A 24mm*4 wide-angle lens gives you the tools to make images of your special trips more exciting and dynamic. The wide range of the lens also lets you shoot intimate indoor shots as well.

35mm*4



24mm*4



10x Optical Zoom

Exquisite detail from a distance.

10x optical zoom takes you up close to distant subjects for intimate shots. CCD Shift Stabilization minimizes the effects of camera movement for beautiful zoom images every time.

Approximate HD (No Deterioration) Zoom Factors

• 8M Size:12.3x • 5M Size:15.6x • 3M Size:19.5x • VGA:62.4x

1x Optical Zoom



10x Optical Zoom



I EXILIM Engine 4.0

Improved Image Quality Backlit Scene Shooting without setups Night Scene Shooting without a tripod

NEW | Landscape Effect with dedicated button (P.6) [Landscape]

Make-up Mode with dedicated button

UP I Dynamic Photo

Dedicated button [Make-up] button

I Tracking AF **I** Auto Shutter **I AUTO BEST SHOT** I Super Clear LCD I CCD Shift Stabilization Anti Shake DSP I Face Detection I HD Movie Recording

• See pages 21 through 29 for details.

Megapixels

Optical Zoom

Large LCD



Use Dynamic Photo to create original e-greeting cards! See page 21 for details.

*1. Based on 100 snapshots per day, calculated according to CIPA standards (based on CASIO data). *2. Approximate, based on CIPA standards. Normal screen brightness (based on CASIO data). *3. 10.1 megapixels, 3.0" LCD model *4. Converted to 35mm film format. • Screen and printed images shown in this catalog are simulations for explanatory purposes only. Appearance of actual images may be different from that shown here.

12.1 Megapixels **S 12**

Advanced technology at your fingertips. All in a stylish card camera.

Make-up Mode

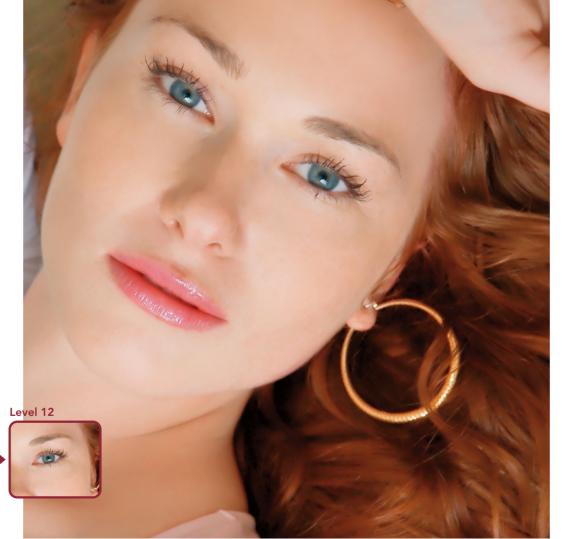
Beautiful portraits every time.

A choice of levels lets you select to what extent wrinkles, blotches, and age lines are suppressed to smoothen skin textures. It's just like having a make up artist on hand all the time.

Normal Mode









• GREEN EX-S12GN • SILVER EX-S12SR

• BLACK EX-S12BK

Megapixels

Optical Zoom

Wide LCD

Battery Life

I EXILIM Engine 4.0 I Super Clear LCD Improved Image Quality I Anti Shake DSP Backlit Scene Shooting without setups | Face Detection I Tracking AF I HD Movie Recording Make-up Mode I Data Storage I Dynamic Photo • See pages 21 through 29 for details.

Use Dynamic Photo to create original e-greeting cards! See page 21 for details.

I Auto Shutter I AUTO BEST SHOT

BEST SHOT

^{*1.} Approximate; CIPA standards. Normal screen brightness (based on CASIO data)

[•] Screen and printed images shown in this catalog are simulations for explanatory purposes only. Actual images may appear different from those shown here.

The New EXILIM sees things in your images before you do.

Intelligent AF

Simply aim the camera and it searches for subjects and it displays focus points automatically

Intelligent Auto Focus not only detects faces, it also detects and other subjects in an image that should be focused. Simply aim the camera, and it automatically determines the logical composition of the image and arranges focus frames accordingly. Any human faces the camera detects in the image are given priority.

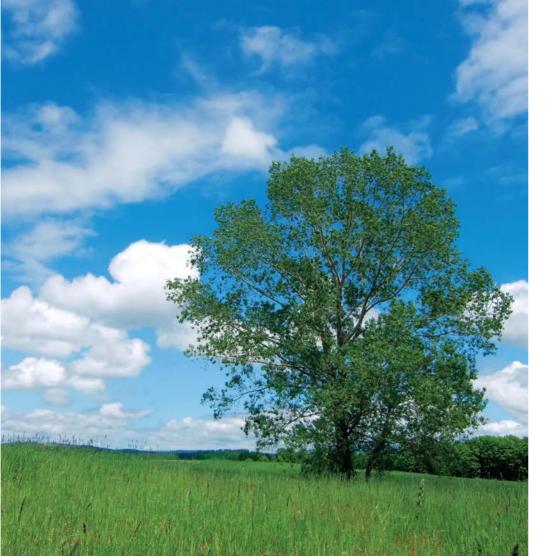


The camera determines the composition of your image and arranges focus frames according to its subjects.

Long Battery Life

550 shots per charge*1

EXILIM original battery technology delivers long battery life. A single charge provides enough power to shoot 550 images.*1





 BROWN EX-Z450BN

Megapixels

• PINK EX-Z450PK

 RED EX-Z450RD

Optical Zoom

Wide-angle

Large LCD

SILVER

EX-Z450SR

BEST SHOT

Backlit Scene Shooting without setups Night Scene Shooting without a tripod NEW I Intelligent AF ▶ (P.5)

I Tracking AF

NEW | Landscape Effect ▶ (P.6)

Make-up Mode with dedicated button

UP I Dynamic Photo

Z400 12.1 Megapixels



GOLD EX-Z400GD



SILVER EX-Z400SR



BROWN EX-Z400BN



PINK EX-Z400PK

I AUTO BEST SHOT I Super Clear LCD I CCD Shift Stabilization Anti Shake DSP I Face Detection

I HD Movie Recording

• See pages 21 through 29 for details.

Use Dynamic Photo to create original e-greeting cards! • See page 21 for details.

- *1. Approximate; CIPA standards. Normal screen brightness (based on CASIO data) *2. Converted to 35mm film format.
- Screen and printed images shown in this catalog are simulations for explanatory purposes only. Actual images may appear different from those shown here.

Advanced technology ensures outstanding image quality.

Night scenes at the touch of the shutter button Leave settings up to the camera for beautiful portraits and background.

Simply press the shutter button for ideal brightness and contrast centered on the subject's face. Background areas that can't be reached by the flash are enhanced for more natural looking images.

Beautiful skin tones

Past Models



Digital noise on the skin and in dark areas. black background







I EXILIM Engine 4.0 Improved Image Quality Backlit Scene Shooting without setups Night Scene Shooting without a tripod I Tracking AF

Make-up Mode

UP | Dynamic Photo

| Auto Shutter **I** AUTO BEST SHOT I CCD Shift Stabilization Anti Shake DSP I Face Detection I HD Movie Recording

• See pages 21 through 29 for details.









Wide LCD Battery Life

250





Use Dynamic Photo to create original e-greeting cards! See page 21 for details.

*1. Converted to 35mm film format. *2. Approximate; CIPA standards. Normal screen brightness (based on CASIO data)

• GOLD EX-Z280GD

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Automatic setups for portraits and landscapes. A new standard for High Definition movies.



Beautiful backlit images



Intelligent AF



HD Movie

I EXILIM Engine 4.0 Improved Image Quality Backlit Scene Shooting without setups

NEW I Intelligent AF ▶ (P.5)

I Tracking AF

NEW | Landscape Effect ▶ (P.6)

I Make-up Mode

UP | Dynamic Photo

I Auto Shutter **I** AUTO BEST SHOT Anti Shake DSP I Face Detection I HD Movie Recording l easy Mode I Selectable focus frame and menu color

• See pages 21 through 29 for details.









Soft and smooth skin textures





Use Dynamic Photo to create original e-greeting cards! See page 21 for details.

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^{*1.} Approximate; CIPA standards. Normal screen brightness (based on CASIO data)























PURPLE EX-Z2PE

Z2SR • PINK EX-Z2PK

[•] SILVER EX-Z2SR

²PK • BLACK EX-Z2BK

^{*1.} Approximate; CIPA standards. Normal screen brightness (based on CASIO data)

Screen and printed images shown in this catalog are simulations for explanatory purposes only. Actual images may appear different from those shown here.

Dynamic PhotoTM







Happy New Year!



Just Married!

See more at: http://www.exilim.com/dp/

Create original e-greetings right on the camera and sent them to all your friends!



The easy way to make Dynamic Photo™ more fun!

Dynamic Photo Manager simplifies

Dynamic Photo creation and management!

Quickly and easily import
Dynamic Photo images and
snapshots to your computer
for storage.

Convert Dynamic Photo images to movies.

Select the characters you want and copy them to the SD card loaded in your EXILIM.

Attach Dynamic Photo images to e-mail.

Copy from the supplied CD-ROM!

or

Download from the web!

Includes a big collection of versatile sample characters you can insert into snapshots to create original e-greeting cards and more!





















For exquisite portraits

Make-up Mode

H10 | S12 | Z450 | Z400 | Z280 | Z90 | Z33

Selectable Make-up Level

The Make-up Mode gives you beautiful portraits with a press of the shutter button. You can select one of 12 different Make-up Levels for exactly the effect you want.

Preview Make-up Mode effects before vou shoot!

Changes in the Make-up Level are reflected immediately on the monitor screen image so you can check what your image will look like before you shoot it.





Level 12



Press the Make-up button for instant skin texture enhancement. (H10, Z450 and Z400)









Smile Detection Auto Shutter H10 | S12 | Z450 | Z400 | Z280 | Z90 | Z33 | Z2 | Z29

In addition to optimizing focus and brightness, EXILIM also detects the expression on the subject's face and releases the shutter automatically when it detects a smile.*1 It's the easy way to ensure perfect portraits of smiling faces every time.



Self Portrait Auto Shutter

H10 | S12 | Z450 | Z400 | Z280 | Z90 | Z33 | Z2 | Z29

Even when you are unable to view the on-screen image, the camera releases the shutter automatically when it detects a face is fully within the monitor screen and there is no blur-causing movement.



Face Detection FC100 | FS10 | F1 | FH20 H10 | S12 | Z450 | Z400 | Z280 | Z90 | Z33 | Z2 | Z29

Face Detection for automatic face focusing and brightness adjustment

The camera locates faces anywhere within the monitor screen area and optimizes focus and brightness. Even in backlit scenes, faces come out bright and clear.





Automatic tracking and focusing of faces (Excluding Z33, Z2, Z29)

Even when a subject is moving, the camera automatically follows the detected face, while updating the focus setting.







For easy recording of difficult scenes

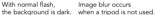
Night Scene Shooting without a tripod H10 | S12 | Z450 | Z400 | Z280 | Z90 | Z33 | Z2 | Z29

The camera automatically detects whether or not it is mounted on a tripod. If it detects hand-held operation, the high-speed image processing CPU

performs high-level dark area correction and digital noise filtering. Even when shooting without a tripod, image blur is suppressed for high-quality night scene









Subject and background is bright, image blur is minimal.

Backlit Scene Shooting without setups H10 | S12 | Z450 | Z400 | Z280 | Z90 | Z33 | Z2 | Z29

Backlit subjects (which often produce a subject with a dark face) also come out with natural brightness with a touch of the shutter button.

Overexposure of the background is suppressed, producing a sky that is as

blue and beautiful as the real thing. Improved gradation provides rich detail in the blue sky and more natural shading of the skin.







Face is bright, but sky is overexposed.



Simply press the shutter button! Face and sky look as good as the real thing.

[•] Screen and printed images shown in this catalog are simulations for explanatory purposes only. Actual images may appear different from those shown here. • The effectiveness of the Make-up Mode depends on the individual face.

For blur-free images

Anti Blur	FC100 FS10 F1 FH20	
H10 S12 Z450 Z400 Z280	Z90 Z33 Z2 Z29	٦

ICCD / CMOS* Shift Stabilization (Excluding FS10, S12, Z90, Z33, Z2, Z29) This feature stabilizes the image mechanically during recording whenever camera movement is detected. Images come out crisp and clear, even under conditions that are prone to camera movement. *FC100. F1 and FH20 models only





Anti Shake DSP / Anti Shake Mode

Higher sensitivity and faster shutter speeds reduce the chance of image blur due to hand and subject movement, making it possible to capture clear images without using the flash.

Auto ISO sensitivity control (Excluding FC100, FS10, F1, FH20, Z33, Z2, Z29) The camera increases ISO sensitivity automatically to minimize blur when it detects subject movement, and decreases sensitivity to minimize digital noise when it detects that the subject is stationary.

Anti Blur Auto Shutter (Excluding FC100, FS10, F1, FH20, Z33, Z2, Z29) Hand movement during shutter button operation is the leading cause of image blur. Anti Blur Auto Shutter eliminates this, and also minimizes the chance of ruined images, by releasing the shutter automatically when the camera detects that the camera and subject are still.

— For shooting without troublesome setups —

AUTO BEST SHOT H10 | S12 | Z450 | Z400 | Z280 | Z90 | Z33 | Z2 | Z29

Simply aim at the subject.

The camera detects the scene type and sets up automatically!

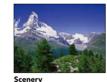
The camera detects focus, brightness, face, movement, and other factors, and then selects one of six BEST SHOT sample scenes to match shooting conditions. All you need do is press the shutter button for perfect images every time. Pointing the camera at a person, for example, causes the "Portrait" scene to be selected, and the camera adjusts so the person's face fills the screen.



Point the camera at the subject and it selects one of six BEST SHOT scenes automatically.













Flower (Macro)

Sports (Movement)

Other Functions

Super Clear LCD	FC100 FS10 F1 FH20
H10 S12 Z450 Z400 Z280	Z90 Z33 Z2 Z29

High Contrast Ratio for realistic images

A new LCD provides some of the highest contrast among today's digital camera displays. Light and dark areas stand out in clear contrast for beautiful images that look just like the real thing.





Super Clear LCD

Image looks just like the real thing.

Wide-angle lens covers everything from landscapes to indoor images. A wide-angle lens lets you capture more of the scenery to give the viewer a

sense of actually being there. Indoors and out, a deep depth of field maintains sharp focus for both foreground and background images.

Wide-angle Lens



H10 | S12 | Z450 | Z400 | Z280 | Z90 | Z33 | Z2 | Z29



FC100 | FS10 | F1 | FH20

Wide Viewing Angle for easy viewing from any angle

A wide viewing angle means images look good no matter if they are viewed from above, below, left or right. This means that everyone around you can enjoy viewing images on the monitor screen.





Wide-angle Lens Models

Tracking AF

• 24mm*1 wide-angle (EX-H10) • 26mm*1 wide-angle (EX-FH20, EX-Z280) • 28mm*1 wide-angle (EX-Z450, EX-Z400)

Super Bright LCD for easy viewing, even outdoors

The camera can be configured to detect available light and adjust screen brightness automatically, or you can select one of a number of fixed brightness levels.



Selectable Focus Frame							
H10 S12 Z450 Z400 Z280 Z90 Z33 Z2 Z29							

Selectable focus frame images make picture taking more fun.









* 790. 733. 72 only





H10 | S12 | Z450 | Z400 | Z280 | Z90 | Z33 | Z2 | Z29 Auto tracking and focusing of moving subjects

Tracking AF locks onto a moving subject and adjusts focus as required. Even if the subject exits the frame. Tracking AF remembers the subject and picks it up again automatically when it re-enters. Focus is continually updated until the shutter button is pressed.



Z400 simply press the d or ▶ control button to start Tracking AF.



the subject!







Continual tracking, even if Auto Tracking restarts. the subject is out of view

[•] Screen and printed images shown in this catalog are simulations for explanatory purposes only. Actual images may appear different from those shown here.

Powerful features and functions designed for performance!

Snapshot Recording

■ Continuous Shutter

Normal-speed Continuous Shutter lets you shoot without stopping until memory is full. High-speed Continuous Shutter gives you faster shooting speed. Flash Continuous Shutter shoots a series of images with flash.

 Z33, Z2, and Z29 come with Normal-speed CS only. Flash CS not available on the FC100 and FS10. FH20 does not support Normal-speed CS.

■ Auto Macro*¹

Auto Macro switches to the macro mode automatically when a subject is within the macro range. This helps to ensure that images are always in focus and reduces the chance of focus error.

■ Snapshot In Movie*2

Pressing the shutter release button while movie recording is in progress shoots a snapshot without leaving the movie mode. The camera automatically returns to movie recording after shooting the snapshot.

■ RGB Histogram

Displays a histogram that lets you check exposure. The histogram is a graph that shows image brightness in accordance with current exposure settings.

■ Monitor Screen Grid

The monitor screen can be configured to display a grid that helps when composing images.

■ Soft Flash*3

Suppresses flash intensity regardless of the exposure setting to prevent overexposure in flash images.

■ Red Eve Correction*4

Removes red-eye, which can occur when shooting with flash.

Snapshot Playback

■ Screen Languages

Select from among English, Spanish, French, Italian, Portuguese, Japanese, Traditional Chinese, Simplified Chinese, Korean, Danish, Finnish, Norwegian, Swedish, Dutch Polish, Czech, Hungarian, Arabic, *5 Russian, *5 Indonesian, *5 Turkish, *6 and Thai *6.

Snapshot Playback

■ White Balance Adjustment*7

White balance lets you select a setting from among a variety of different light sources, which will correct the color cast of recorded image for more naturally colored snapshots

■ Image Brightness Adjustment*7

This setting lets you adjust the brightness of a recorded snapshot.

■ Color Restoration*3

Restores the colors of old, faded photographs to make them brighter and clearer. Skin colors, sky, and other colors are beautifully restored and the result is saved as a new digital image.

■ Timestamp

The date and time that the shutter button is pressed can be stamped into each image.

- The stamped date cannot be edited. Digital zoom is not supported while time stamping is turned on FC100, FS10, F1, FH20: Digital zoom supported while time stamping is turned on.
- World Time

World Time is convenient for international travel. Simply select one of the 162 cities (32 time zones) and you can keep track of the current time in your home time zone and other time zones.

Connection and Printing

■ PictBridge

Direct Connection to a Printer for Easy Printing Simply connect the camera directly to a printer for printing, without going through a computer.



PictBridge

PRINT Image

- Contact your printer manufacturer for information about models that support these protocols, printer upgrades, etc. Applies to PictBridge compatible printers only.
- PRINT Image Matching III Compatible*7 / Exif Print Compatible

PRINT Image Matching III Compatible

PRINT Image Matching III is a trademark of

- Exif Print (Exif 2.2) Compatible Contact your printer manufacturer for
- information about models that support the protocols, printer upgrades, etc.

■ Wide TV Output

Seiko Epson Corporation.

Use the bundled AV cable for quick and easy connection to a DVD recorder or TV so you can enjoy your movies and snapshots on a big screen.

Movie Recording and Playback

single-image snapshot, or a nine-image snapshot.

■ Prerecord Movie*7

■ MOTION PRINT

Pressing the movie button records a movie, starting from the point four seconds before you pressed the movie button. This helps you capture difficult-to-time moments without worrying that your timing may be off. Shutter button operation with the FH20



Dedicated Movie Button (Excluding FH20, Z29)

■ Movie Editing*7

A simple camera operation lets you cut unwanted scenes from movies after you record them. Simple editing procedures can be performed on the camera, without using a computer.

■ YouTube™ CAPTURE MODE

Records movies at an optimal size for uploading to the YouTube™ file sharing site. Included software makes uploading to YouTube™ guick



*1. Full wide-angle only for the Z2 and Z29. *2. Not available on the FH20 and Z29 models. Snapshot In Movie disabled during High Speed Movie recording. *3. Not available on the FC100, FS10, F1, FH20, Z33, Z2 and Z29 models. *4. Available on the H10, S12, Z450, Z400, Z90 and Z280 models. Restoration performed during playback on the Z300 and Z250 models. *5. Not available on the F1 model. *6. Not available on the F1 and FH20 models. *7. Not available on the H10, Z33, Z2, and Z29 models. • YouTube upload functionality is included under license from YouTube LLC. The presence of YouTube upload functionality in this product is not an endorsement or recommendation of the product by YouTube LLC.

Bundled Software (See the CASIO Digital Camera website for details about operating environments and updates.)

Windows® / Windows Vista®	FC100	FS10	F1	FH20	H10	S12	Z450	Z400	Z280	Z90	Z33	Z2	Z29
Dynamic Photo Maneger							•		•	•			
Photo Transport	•	•			•	•	•	•	•	•	•	•	•
DATA TRANSPORT						•							
YouTube™ Uploader for CASIO*	•	•	•	•	•	•	•	•	•	•	•	•	•
ArcSoft TotalMedia™ Extreme for CASIO			•										
Mac OS®	FC100	FS10	F1	FH20	H10	S12	Z450	Z400	Z280	Z90	Z33	Z2	Z29

MOTION PRINT lets you print a specific frame of a movie as a snapshot. You can create a

Operating Systems for Movie Playback

DATA TRANSPORT

Windows® 2000 / XP, Windows Vista®	AVI (Motion JPEG)	MOV (H.264 / AVC)		
Recommended Computer System	CPU: Pentium 4 3.2 GHz or higher	CPU: Pentium 4 3.2 GHz or higher		
Required Software	Windows Media Player / DirectX® 9.0c or higher	DirectX® 9.0c or higher / QuickTime® 7 or higher		
Required Software	Windows Media Flayer / DirectA 9.00 or higher	DirectX 7.0c or higher / QuickTime / or higher		
Mac OS®	AVI (Motion JPEG)	MOV (H.264 / AVC)		
	, ,			

Supported Movie Recording Formats

	FC100	FS10	F1	FH20	H10	S12	Z450	Z400	Z280	Z90	Z33	Z2	Z29
AVI (Motion JPEG)	•	•		•	•	•	•	•	•	•	•	•	•
MOV (H.264 / AVC)			•										

Minimum Computer System Requirements

Windows® / Windows Vista®	2000	XP	Vista
Dynamic Photo Maneger		•	•
Photo Transport	•	•	•
DATA TRANSPORT	•	•	•
YouTube™ Uploader for CASIO*	● (SP4)	● (SP2, SP3)	•
ArcSoft TotalMedia™ Extreme for CASIO		● (SP2, SP3)	•
Mac OS®	OS 9		OS X

Mac OS®	OS 9	os x
DATA TRANSPORT		● (OS 10.2.8 or higher)

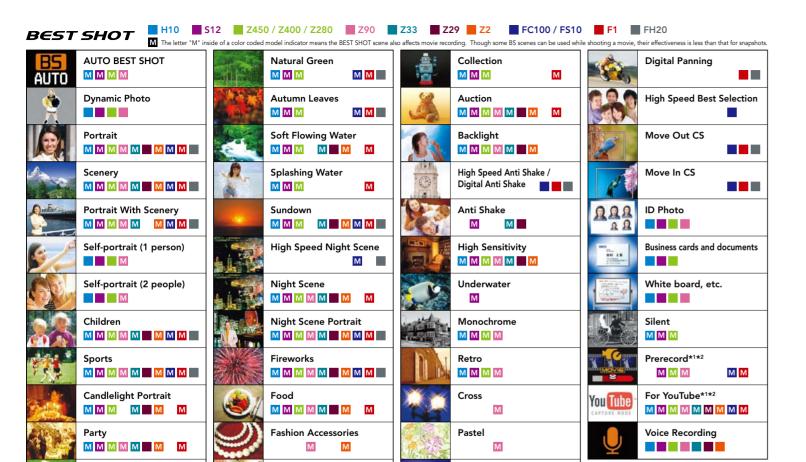
Computer Connection Environment

Operates on connection of USB cable using the operating system's standard USB driver. Software installation not required. Windows 2000/XP/Vista Macintosh OS9/OS X (10.1, 10.2, 10.3, 10.4, 10.5)

* This product's YouTube upload functionality is included under license from YouTube LLC. The presence of YouTube upload functionality in this product is not an endorsement or recommendation of the product by YouTube LLC

Important! The above are recommended system environments. Configuring one of these environments does not guarantee proper operation. Even if your computer meets the minimum requirements described above, certain settings and other installed software may interfere with proper playback of movies.

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Twilight

M M M

Multi-motion image

Magazine

M M

M M M M M M M

M M M M M M M

Flower

*1	Movie	only

^{*2} FH20 allows configuration using the mode dial or control panel.

SPECIFICATION		HIGH SPEE	DEXILIM		
CHART	EX-FC100	EX-FS10	EX-F1	EX-FH20	
Number of Effective Pixels	Approximately 9.1 megapixels	Approximately 9.1 megapixels	Approximately 6.0 megapixels	Approximately 9.1 megapixels	
mage Sensor	1/2.3-inch high-speed CMOS (Total pixels: 10.29 megapixels)	1/2.3-inch high-speed CMOS (Total pixels: 10.29 megapixels)	1/1.8-inch high-speed CMOS (Total pixels: 6.6 megapixels)	1/2.3-inch high-speed CMOS (Total pixels: 10.29 megapixels)	
Finder	Monitor Screen: 2.7-inch TFT color LCD / 230,400 dots (960 x 240)	Monitor Screen: 2.5-inch TFT color LCD / 230,400 dots (960 x 240)	Monitor Screen: 2.8-inch wide TFT color LCD / 230,160 dots (959 x 240) Electronic View Finder: 0.2-inch, equivalent to 201,600 dots	Monitor Screen: 3.0-inch TFT color LCD / 230,400 dots (960 x 24 Electronic View Finder: 0.2-inch, equivalent to 201,600 dots	
File Format	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Movies: AVI format, Motion JPEG, IMA-ADPCM (monaural)	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Movies: AVI format, Motion JPEG, IMA-ADPCM (monaural)	Snapshots: RAW (DNG*), JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Movies: MOV format, H.264/AVC, IMA-ADPCM (stereo) TONG file format is one type of RAW image file, and it is recommended by Adobe Systems Incorporated for use as a standard image file format.	Snapshots: RAW (DNG*), JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF complian Movies: AVI format, Motion JPEG, (IMA-ADPCM (monaural) DNG file format is one type of RAW image file, and it is recommended by Adobe by Systems Incorporated for use as a standard image file format.	
Recording Media	31.9*4 MB built-in flash memory, SD Memory Card, SDHC Memory Card	31.9*4 MB built-in flash memory, SD Memory Card, SDHC Memory Card	31.9*4 MB built-in flash memory, SD Memory Card, SDHC Memory Card	31.9*4 MB built-in flash memory, SD Memory Card, SDHC Memory Car	
Number of Recorded Pixels	Snapshots: 3,456 x 2,592 / 3,456 x 2,304 (32) / 3,456 x 1,944 (16:9) / 2,816 x 2,112 / 2,304 x 1,728 / 1,600 x 1,200 / 640 x 480 (VGA) STD Movise 604 x 480 30 ftps 1 + 10 Movies: 1,300 x 720 (30 ftps) High-speed Movies: 224 x 64 (1,000 ftps) / 224 x 168 (420 ftps) / 480 x 360 (210 ftps, 30 tp 210 ftps)	Snapshots: 3,456 x 2,592 / 3,456 x 2,304 (3:2) / 3,456 x 1,944 (16:9) / 2,816 x 2,112 / 3,94 x 1,728 / 1,600 x 1,200 / 640 x 480 (VGA) STD Movise 640 x 480 (30 fps) + 10 Movises: 1,500 x 720 (30 fps) / 24 x 168 (420 fps) / 480 x 360 (210 fps, 30 te 210 fps, 30 te 21	Snapshots: RAW / 2,816 x 2,112 / 2,816 x 1,872 (3:2) / 2,816 x 1,584 (16:9) / 2,304 x 1,728 / 2,048 x 1,536 / 1,600 x 1,200 / 640 x 480 (VCA) STD Movies: 600 x 480 (30 fpg) HD Movies: 1,720 x 1,180 (FHQ). 60 fields per second) / 1,280 x 720 (HD). 30 fpg) HD Movies: 1,720 x 1,180 (FHQ). 60 fields per second) / 1,280 x 720 (HD). 30 fpg) HD Movies: 1,720 x 1,180 (FHQ). 612 x 127 (800 fpg). 512 x 34 (300 fpg. 30 x 30 fpg)	Snapshots: RAW / 3,456 x 2,592 / 3,456 x 2,304 (3.2) / 3,456 x 1,944 (16.9) STD Movies: 640 x 480 (3.0 fp.) + HD Movies: 1,280 x 7,20 (3.0 fp.) High-speed Movies: 224 x 56 (1,000 fp.s) / 224 x 168 (420 fp.) 480 x 300 (210 fp.s) 500 x 210 (3.0 fp.)	
Lens / Focal Length (Snapshots)	9 lenses in 7 groups, including aspherical lens; F3.6 (W) to F4.5 (T) (Approximately 37 to 185 mm equivalent to 35 mm film)	11 lenses in 9 groups, including aspherical lens; F3.9 (W) to F5.4 (T) (Approximately 38 to 114 mm equivalent to 35 mm film)	12 lenses in 9 groups, including aspherical lens; F2.7 (W) to F4.6 (T) (Approximately 36 to 432 mm equivalent to 35 mm film)	14 lenses in 11 groups, including aspherical lens; F2.8 (W) to F4.5 ((Approximately 26 to 520 mm equivalent to 35 mm film)	
Zoom	5x optical zoom, 4x digital zoom, maximum 27x HD zoom (with VGA size)	3x optical zoom, 4x digital zoom, maximum 16.2x HD zoom (with VGA size)	12x optical zoom, 4x digital zoom, maximum 52.1x HD zoom (with VGA size)	20x optical zoom, 4x digital zoom, maximum 108x HD zoom (with VGA size	
Focus	Type: Contrast Detection Auto Focus Mode: Auto Focus, Macro, Pan Focus, Infinity, Manual Focus AF Area: Spot, Free, Auto Tracking AF Assist Light	Type: Contrast Detection Auto Focus Mode: Auto Focus, Macro, Pan Focus, Infinity, Manual Focus AF Area: Spot, Free, Auto Tracking AF Assist Light	Type: Contrast Detection Auto Focus Mode: Auto Focus, Macro, Infinity, Manual Focus AF Area: Spot, Free, Auto Tracking AF Assist Light	Type: Contrast Detection Auto Focus Mode: Auto Focus, Macro, Super Macro, Manual Focus AF Area: Spot, Free, Auto Tracking AF Assist Light	
Approximate Focus Range (Snapshots)	Auto Focus: 40 cm to ∞ (W) / Macro: 3 cm to 50 cm (W) / Infinity: ∞ / Manual Focus: 3 cm to ∞ (W) *From lens surface. *Range is affected by optical zoom.	Auto Focus: 40 cm to ∞ (W) / Macro: 10 cm to 50 cm (W) / Infinity: ∞ / Manual Focus: 10 cm to ∞ (W) *From lens surface. *Range is affected by optical zoom.	Auto Focus: 40 cm to ∞ (W) / Macro: 5 cm to 50 cm (W) / Infinity: ∞ / Manual Focus: 5 cm to ∞ (W) *From lens surface. *Range is affected by optical zoom.	Auto Focus: 40 cm to ∞ (W) / Macro: 12 cm to 50 cm (W) / Super Macro: 1 cm to 12 cm Manual Focus: 12 cm to ∞ (W), 1 cm to ∞ (Super Macro Zoom) *From lens surface. *Range is affected by optical zoom.	
Exposure	Metering: Multi pattern, Center Weighted, Spot by imaging element Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)	Metering: Multi pattern, Center Weighted, Spot by imaging element Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)	Metering: Multi pattern, Center Weighted, Spot by imaging element Control: Program AE, Aperture Priority AE, Shutter Speed Priority AE, Manual Exposure Compensation: -2 EV to +2 EV (in 1/3 EV steps)	Metering: Multi pattern, Center Weighted, Spot by imaging element Control: Program AE, Aperture Priority AE, Shutter Speed Priority AE, Manual Expos Compensation: -2 EV to +2 EV (in 1/3 EV steps)	
Aperture	F3.6 (W) to F8.5 (W) *Optical zoom and record mode change aperture value.	F3.9 (W) to F7.1 (W) *Optical zoom and record mode change aperture value.	Auto / Shutter Speed Priority AE: F2.7 (W) to F15 (W), auto switching Aperture Priority AE / Manual Exposure: F2.7 (W) to F7.5 (W) With ND filter. *Optical zoom and record mode change aperture value.	F2.0 (VV) to F7.9 (VV)	
Shutter Type / Shutter Speed	CMOS electronic shutter, mechanical shutter • Auto (Program AE): 1 to 1/1000 second (High-speed Continuous Shutter: up to 1/40000 second) • Night Scene: 4 seconds maximum *May differ due to camera setup.	CMOS electronic shutter, mechanical shutter • Auto (Program AE): 1 to 1/1250 second (High-speed Continuous Shutter: up to 1/40000 second) • Night Scene: 4 seconds maximum *May differ due to camera setup.	CMOS electronic shutter, mechanical shutter • Auto (Program AE) / Aperture Priority AE: 1 to 1/2000 second • Shutter Speed Priority AE / Manual Exposure: 60 to 1/40000 second • May differ due to camera setup.	CMOS electronic shutter, mechanical shutter • Auto (Program AE) / Aperture Priority AE: 1 to 1/2000 second • Shutter Speed Priority AE / Manual Exposure: 30 to 1/2000 second (High-speed Continuous Shutter: up to 1/40000 second) "May differ due to camera setup.	
White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	
Sensitivity (SOS)*1	Snapshots: Auto, ISO100, ISO200, ISO400, ISO800, ISO1600 Movies: Auto	Snapshots: Auto, ISO100, ISO200, ISO400, ISO800, ISO1600 Movies: Auto	Snapshots: Auto, ISO100, ISO200, ISO400, ISO800, ISO1600 Movies: Auto (Hi-speed Movie when Manual Exposure mode: ISO100, ISO200, ISO400, ISO800, ISO1600)	Snapshots: Auto, ISO100, ISO200, ISO400, ISO800, ISO160 Movies: Auto (Hi-speed Movie when Manual Exposure mod ISO100, ISO200, ISO400, ISO800, ISO1600)	
Self-timer	10 seconds or 2 seconds, Triple Self-timer	10 seconds or 2 seconds, Triple Self-timer	10 seconds or 2 seconds, Triple Self-timer	10 seconds or 2 seconds, Triple Self-timer	
Built-in Flash	Flash Modes: Auto, Flash off, Flash on, Red Eye Reduction Approximate Flash Range: (Normal) 0.1 to 3.2 m (W) 0.6 to 2.5 m (T) From lens surface. "SO sensitivity: "Auto" "Optical zoom changes range. Toptical zoom changes range. Toptical zoom changes range.	Flash Modes: Auto, Flash off, Flash on, Red Eye Reduction Approximate Flash Range: (Normal) 0.4 to 2.6 m (W) 0.7 to 1.9 m (T) From lens surface. "ISO sensitivity: "Auto" "Optical zoom changes range. Toptical zoom changes range.	Flish Modes: Auto, Flash off, Flash on, Red Eye Reduction, External Flash Approximate Flash Range: [Normal] 0.5 to 6.7 m (W) /1.1 to 3.9 m (T), [Flash Continuous Stutter [Recording] Inlangeal[0.5 to 1.1 m (W) /1.1 to 1.8 m (T) "From lens surface. "ISO sensitivity: "Auto" "Optical zoom changes range.	Flash Modes: Auto, Flash off, Flash on, Red Eye Reduction Approximate Flash Range; [Normal] 0.4 to 7.0 m (M) / 1.3 to 4.4 m (T), [Flash Continuous Shatter (Recording 5 images)] 0.6 to 2.3 m (M) / 1.3 to 1.4 m From lens surface. "ISO sensitivity: "Auto" "Optical zoom changes range.	
Timekeeping Functions	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp	Date and time (Current date and time are stored with image da Auto calendar up to 2049, Timestamp	
Other Functions	BEST SHOT, YouTube™ CAPTURE MODE, Face Detection, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)	BEST SHOT, YouTube $^{\text{TM}}$ CAPTURE MODE, Face Detection, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)	BEST SHOT, YouTube™ CAPTURE MODE, Face Detection, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)	BEST SHOT, YouTube™ CAPTURE MODE, Face Detection, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PA	
Input / Output Terminals	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector, HDMI™ output (Mini)*. Hot shoe, External stereo microphone jack (supports plug-in power). AC adaptor connection (DC-IN) *1080/50i output is not supported for PAL output using an HDMI™.	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector, AC adaptor connection (DC-IN)	
Power Source	Rechargeable Lithium Ion Battery (NP-40)	Rechargeable Lithium Ion Battery (NP-60)	Rechargeable Lithium Ion Battery (NP-100) or Optional AC Adaptor (AD-C100)	Four AA-size alkaline batteries or four AA-size rechargeable NiMH batteries or Optional AC Adaptor (AD-C100)	
Dimensions*2	99.8 (W) x 58.5 (H) x 22.6 (D) mm	97.1 (W) x 59.4 (H) x 16.3 (D) mm	127.7 (W) x 79.6 (H) x 130.1 (D) mm	122.6 (W) x 81.4 (H) x 84.5 (D) mm	
Weight*3	Approximately 145 g	Approximately 119 g	Approximately 671 g	Approximately 483 g	
Bundled Accessories	Rechargeable Lithium Ion Battery (NP-40), Lithium Ion Battery Charger, AC Power Cord, Special USB Cable, Special AV Cable, Strap, CD-ROM	Rechargeable Lithium Ion Battery (NP-60), Lithium Ion Battery Charger, AC Power Cord, Special USB Cable, Special AV Cable, Strap, CD-ROM	Rechargeable Lithium Ion Battery (NP-100), Lithium Ion Battery Charger, AC Power Cord, Special USB Cable, Special AV Cable, Strap, Lens Cap, Shoe Cap, Lens Hood, Remote Shutter Release, CD-ROM	Four AA-size alkaline batteries, Special USB Cable, Special AV Cable, Strap, Lens Cap, Cap Holder, CD-ROM	

^{*1.} SOS: Standard Output Sensitivity. *2. Excluding projections *3. Excluding battery and bundled accessories *4. built-in memory capacity after formatting.

1. 303. Standard Output Sensitivity. 2. Excluding projections 3. Excluding projections 3. Excluding pattern of mining selections 4. Dutlet in memory capacity after normating.

SPECIFICATION	EXILIM Hi-ZOOM	EXILIM CARD			EXIL	IM ZOOM		
CHART	EX-H10	EX-\$12	EX-Z450	EX-Z400	EX-Z280	EX-Z90	EX-Z33	EX-Z29
Number of Effective Pixels	Approximately 12.1 megapixels	Approximately 12.1 megapixels	Approximately 12.1 megapixels	Approximately 12.1 megapixels	Approximately 12.1 megapixels	Approximately 12.1 megapixels	Approximately 10.1 megapixels	Approximately 10.1 megapixels
Image Sensor	1/2.3-inch square pixel CCD (Total pixels: 12.39 megapixels)	1/2.3-inch square pixel CCD (Total pixels: 12.39 megapixels)	1/2.3-inch square pixel CCD (Total pixels: 12.39 megapixels)	1/2.3-inch square pixel CCD (Total pixels: 12.39 megapixels)	1/2.3-inch square pixel CCD (Total pixels: 12.39 megapixels)	1/2.3-inch square pixel CCD (Total pixels: 12.70 megapixels)	1/2.3-inch square pixel CCD (Total pixels: 10.34 megapixels)	1/2.5-inch square pixel CCD (Total pixels: 10.35 megapixels)
	3.0-inch TFT color LCD / 230,400 dots (960 x 240)	2.7-inch wide TFT color LCD / 230,160 dots (959 x 240)	3.0-inch TFT color LCD / 230,400 dots (960 x 240)	3.0-inch TFT color LCD / 230,400 dots (960 x 240)	2.7-inch wide TFT color LCD / 114,960 dots (479 x 240)	2.7-inch TFT color LCD / 230,160 dots (959 x 240)	2.5-inch TFT color LCD / 230,400 dots (960 x 240)	2.7-inch wide TFT color LCD / 114,960 dots (479 x 240)
File Format	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Audio (Voice Recording): WAV (monaural)	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Audio (Voice Recording): WAV (monaural)	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Audio (Voice Recording): WAV (monaural)	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Audio (Voice Recording): WAV (monaural)	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Audio (Voice Recording): WAV (monaural)	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Audio (Voice Recording): WAV (monaural)	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Audio (Voice Recording): WAV (monaural)	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Audio (Voice Recording): WAV (monaural)
Recording Media	35.7*4 MB built-in flash memory, SD Memory Card, SDHC Memory Card	35.2 MB*4 built-in flash memory, SD Memory Card, SDHC Memory Card	35.7 MB*4 built-in flash memory, SD Memory Card, SDHC Memory Card	35.7 MB*4 built-in flash memory, SD Memory Card, SDHC Memory Card	35.7 MB*4 built-in flash memory, SD Memory Card, SDHC Memory Card	35.7 MB*4 built-in flash memory, SD Memory Card, SDHC Memory Card	16.9 MB** built-in flash memory, SD Memory Card, SDHC Memory Card	17.8 MB*4 built-in flash memory, SD Memory Card, SDHC Memory Card
Number of Recorded Pixels (Snapshots)	4,000 x 3,000 / 4,000 x 2,656 (3:2) / 4,000 x 2,240 (16:9) / 3,264 x 2,448 / 2,560 x 1,920 / 2,048 x 1,536 / 640 x 480 (VGA)	4,000 x 3,000 / 4,000 x 2,656 (3:2) / 4,000 x 2,240 (16:9) / 3,264 x 2,448 / 2,560 x 1,920 / 2,048 x 1,536 / 640 x 480 (VGA)	4,000 x 3,000 / 4,000 x 2,656 (3:2) / 4,000 x 2,240 (16:9) / 3,264 x 2,448 / 2,560 x 1,920 / 2,048 x 1,536 / 640 x 480 (VGA)	4,000 x 3,000 / 4,000 x 2,656 (3:2) / 4,000 x 2,240 (16:9) / 3,264 x 2,448 / 2,560 x 1,920 / 2,048 x 1,536 / 640 x 480 (VGA)	4,000 x 3,000 / 4,000 x 2,656 (3:2) / 4,000 x 2,240 (16:9) / 3,264 x 2,448 / 2,560 x 1,920 / 2,048 x 1,536 / 640 x 480 (VGA)	4,000 x 3,000 / 4,000 x 2,656 (3:2) / 4,000 x 2,240 (16:9) / 3,264 x 2,448 / 2,560 x 1,920 / 2,048 x 1,536 / 640 x 480 (VGA)	3,648 x 2,736 / 3,648 x 2,432 (3:2) / 3,648x 2,048 (16:9) / 3,072 x 2,304 / 2,304 x 1,728 / 1,600 x 1,200 / 640 x 480 (VGA)	3,648 x 2,736 / 3,648 x 2,432 (3:2) / 3,648 x 2,048 (16:9) / 3,072 x 2,304 / 2,304 x 1,728 / 1,600 x 1,200 / 640 x 480 (VGA)
Lens / Focal Length	11 lenses in 10 groups, including aspherical lens; F3.2 (W) to F5.7 (T) (Approximately 24 to 240 mm equivalent to 35 mm film)	6 lenses in 5 groups, including aspherical lens; F2.8 (W) to F5.3 (T) (Approximately 36 to 108 mm equivalent to 35 mm film)	7 lenses in 6 groups, including aspherical lens; F2.6 (W) to F5.8 (T) (Approximately 28 to 112 mm equivalent to 35 mm film)	7 lenses in 6 groups, including aspherical lens; F2.6 (W) to F5.8 (T) (Approximately 28 to 112 mm equivalent to 35 mm film)	7 lenses in 6 groups, including aspherical lens; F2.6 (W) to F5.9 (T) (Approximately 26 to 104 mm equivalent to 35 mm film)	6 lenses in 5 groups, including aspherical lens; F3.1 (W) to F5.9 (T) (Approximately 35 to 105 mm equivalent to 35 mm film)	6 lenses in 5 groups, including aspherical lens; F3.1 (W) to F5.6 (T) (Approximately 35.5 to 106.5 mm equivalent to 35 mm film)	6 lenses in 5 groups, including aspherical lens; F2.8 (W) to F5.2 (T) (Approximately 37.5 to 112.5 mm equivalent to 35 mm film)
Zoom	10x optical zoom, 4x digital zoom, maximum 62.4x HD zoom (with VGA size)	3x optical zoom, 4x digital zoom, maximum 18.7x HD zoom (with VGA size)	4x optical zoom, 4x digital zoom, maximum 25x HD zoom (with VGA size)	4x optical zoom, 4x digital zoom, maximum 25x HD zoom (with VGA size)	4x optical zoom, 4x digital zoom, maximum 25x HD zoom (with VGA size)	3x optical zoom, 4x digital zoom, maximum 18.7x HD zoom (with VGA size)	3x optical zoom, 4x digital zoom, maximum 17.1x HD zoom (with VGA size)	3x optical zoom, 4x digital zoom, maximum 17.1x HD zoom (with VGA size)
Focus	Type: Contrast Detection Auto Focus	Type: Contrast Detection Auto Focus • Mode: Auto Focus, Macro, Pan Focus, Infinity, Manual Focus • AF Area: Spot, 9-point multi, Auto Tracking • Focus Lock • Quick Shutter • AF Assist Light	Type: Contrast Detection Auto Focus • Mode: Auto Focus, Macro, Pan Focus, Infinity, Manual Focus • AF Area: Intelligent, Spot, 9-point multi, Auto Tracking • Focus Lock • Quick Shutter • AF Assist Light	Type: Contrast Detection Auto Focus • Mode: Auto Focus, Macro, Pan Focus, Infinity, Manual Focus • AF Area: Spot, 9-point multi, Auto Tracking • Focus Lock • Quick Shutter • AF Assist Light	Type: Contrast Detection Auto Focus Macro, Pan Focus, Infinity, Manual Focus Point multi, Auto Tracking Focus Lock Quick Shutter	Type: Contrast Detection Auto Focus • Mode: Auto Focus, Macro, Pan Focus, Infinity, Manual Focus • AF Area: Intelligent, Spot, 9-point multi, Auto Tracking • Focus Lock • Quick Shutter	Type: Contrast Detection Auto Focus • Mode: Auto Focus, Macro, Pan Focus, Infinity, Manual Focus • AF Area: Spot, 9-point multi • Focus Lock	Type: Contrast Detection Auto Focus • Mode: Auto Focus (Snapshots only), Macro, Pan Focus, Infinity, Manual Focus • AF Area: Spot, 9-point multi • Focus Lock
Approximate Focus Range (Snapshots)	Auto focus: 15 cm to ∞ (W) / Macro: 7 cm to 50 cm (First step from widest setting) *From lens surface. *Optical zoom changes range.	Auto focus: 40 cm to ∞ (W) / Macro: 10 cm to 50 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 10 cm to ∞ (W) / Macro: 10 cm to 50 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 40 cm to ∞ (W) / Macro: 10 cm to 50 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 15 cm to ∞ (W) / Macro: 5 cm to 50 cm (First step from widest setting) *From lens surface. *Optical zoom changes range.	Auto focus: 10 cm to ∞ (W) / Macro: 10 cm to 50 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 10 cm to ∞ (W) / Macro: 10 cm to 50 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 40 cm to ∞ (W) / Macro: 15 cm to 50 cm (W) *From lens surface. *Optical zoom changes range.
Exposure	Metering: Multi pattern, Center Weighted, Spot by CCD Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)	Metering: Multi pattern, Center Weighted, Spot by CCD Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)	Metering: Multi pattern, Center Weighted, Spot by CCD Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)	Metering: Multi pattern, Center Weighted, Spot by CCD Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)	Metering: Multi pattern, Center Weighted, Spot by CCD Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)	Metering: Multi pattern, Center Weighted, Spot by CCD Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)	Metering: Multi pattern, Center Weighted, Spot by CCD Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)	Metering: Multi pattern, Center Weighted, Spot by CCD Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)
Aperture	F3.2 (W) to F7.5 (W) *With ND filter. *Optical zoom changes aperture value.	F2.8 (W) to F7.9 (W) *With ND filter. *Optical zoom changes aperture value.	F2.6 (W) to F7.0 (W) *With ND filter. *Optical zoom changes aperture value.	F2.6 (W) to F7.0 (W) *With ND filter. *Optical zoom changes aperture value.	F2.6 (W) to F7.8 (W) *With ND filter. *Optical zoom changes aperture value.	F3.1 (W) to F5.6 (W) *Optical zoom changes aperture value.	F3.1 (W) to F7.8 (W) *With ND filter. *Optical zoom changes aperture value.	F2.8 (W) to F8.0 (W) *With ND filter. *Optical zoom changes aperture value.
Recording Functions	Dynamic Photo, Landscape Effect, Make-up Mode, Auto Shutter, Face Detection, Continuous Shutter (Normal-speed, 4 fps, 10 fps, Flash), Auto Macro, BEST SHOT, AUTO BEST SHOT, Snapshot In Movie, Voice Recording	Dynamic Photo, Make-up Mode, Auto Shutter, Face Detection, Continuous Shutter (Normal-speed, 4 fps, 10 fps, Flash), Auto Macro, BEST SHOT, AUTO BEST SHOT, Snapshot In Movie, Voice Recording	Dynamic Photo, Landscape Effect, Make-up Mode, Auto Shutter, Face Detection, Continuous Shutter (Normal-speed, 4 fps, 10 fps, Flash), Auto Macro, BEST SHOT, AUTO BEST SHOT, Snapshot In Movie, Voice Recording	Continuous Shutter (Normal-speed, 4 fps, 10 fps, Flash),	Dynamic Photo, Make-up Mode, Auto Shutter, Face Detection, Continuous Shutter (Normal-speed, High-speed, Flash), Auto Macro, BEST SHOT, AUTO BEST SHOT, Snapshot In Movie, Voice Recording, easy Mode	Dynamic Photo, Landscape Effect, Make-up Mode, Auto Shutter, Face Detection, Continuous Shutter (Normal-speed, High-speed, Flash), Auto Macro, BEST SHOT, AUTO BEST SHOT, Snapshot In Movie, Voice Recording, easy Mode	Face Detection, Normal-speed Continuous Shutter, BEST SHOT, Voice Recording, easy Mode	Face Detection, Normal-speed Continuous Shutter, Auto Macro (Full wide-angle only), BEST SHOT, Snapshot In Movie, Voice Recording, easy Mode
Shutter Type / Shutter Speed	CCD shutter, mechanical shutter • Auto (Program AE): 1/2 to 1/2000 second • Night Scene: 4 seconds maximum *May differ due to camera setup.	CCD shutter, mechanical shutter • Auto (Program AE): 1/2 to 1/2000 second • Night Scene: 4 seconds maximum *May differ due to camera setups.	CCD shutter, mechanical shutter • Auto (Program AE): 1/2 to 1/1000 second • Night Scene: 4 seconds maximum *May differ due to camera setup.	CCD shutter, mechanical shutter • Auto (Program AE): 1/2 to 1/1000 second • Night Scene: 4 seconds maximum *May differ due to camera setup.	CCD shutter, mechanical shutter • Auto (Program AE): 1/2 to 1/2000 second • Night Scene: 4 seconds maximum *May differ due to camera setup.	CCD shutter, mechanical shutter • Auto (Program AE): 1/2 to 1/2000 second • Night Scene: 4 seconds maximum *May differ due to camera setup.	CCD shutter, mechanical shutter • Auto (Program AE): 1/2 to 1/2000 second • Night Scene: 4 seconds maximum *May differ due to camera setup.	CCD shutter, mechanical shutter • Auto (Program AE): 1/2 to 1/2000 second • Night Scene: 4 seconds maximum *May differ due to camera setup.
vvnite balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance
	Auto, ISO64, ISO100, ISO200, ISO400, ISO800, ISO1600, ISO3200	Auto, ISO64, ISO100, ISO200, ISO400, ISO800, ISO1600, ISO3200		Auto, ISO64, ISO100, ISO200, ISO400, ISO800, ISO1600, ISO3200	Auto, ISO64, ISO100, ISO200, ISO400, ISO800, ISO1600, ISO3200	Auto, ISO64, ISO100, ISO200, ISO400, ISO800, ISO1600	Auto, ISO64, ISO100, ISO200, ISO400, ISO800, ISO1600	Auto, ISO100, ISO200, ISO400, ISO800, ISO1600
Self-timer	10 seconds or 2 seconds, Triple Self-timer	10 seconds or 2 seconds, Triple Self-timer	10 seconds or 2 seconds, Triple Self-timer	10 seconds or 2 seconds, Triple Self-timer	10 seconds or 2 seconds, Triple Self-timer	10 seconds or 2 seconds, Triple Self-timer	10 seconds or 2 seconds, Triple Self-timer	10 seconds or 2 seconds, Triple Self-timer
Built-in Flash	• Flash Modes: Auto, Flash off, Flash on, 50f Flash, Red Eye Reduction • Approximate Flash Range: [Normal] 0.2 to 3.6 m (W) / 0.5 to 2.0 m (T) [Flash Continuous Shutter] 0.4 to 1.9 m (W) / 0.5 to 1.0 m (T) *From lens surface. *ISO sensitivity: "Auto" • Optical zoom changes range.	 Flash Modes: Auto, Flash off, Flash on, 50ft Flash, Red Eye Reduction Approximate Flash Range: [Normal] 0.1 to 4.0 m (W) / 0.4 to 2.1 m (T) [Flash Continuous Shutter] 0.4 to 1.8 m (W) / 0.4 to 1.0 m (T) "From lens surface. "ISO sensitivity: "Auto." "Optical zoom changes range." 	Flash Modes: Auto, Flash off, Flash on, 50f Flash, Red Eye Reduction Approximate Flash Range: [Normal] 0.1 to 4.5 m (W) / 0.5 to 2.0 m (T) [Flash Continuous Shutter] 0.4 to 2.2 m (W) / 0.5 to 1.0 m (T) From lens surface. "ISO sensitivity: "Auto" Optical zoom changes range."	Flash Modes: Auto, Flash off, Flash on, 50t Flash, Red Eye Reduction Approximate Flash Range: [Normal] 0.1 to 4.5 m (W) / 0.5 to 2.0 m (T) [Flash Continuous Shutter] 0.4 to 2.2 m (W) / 0.5 to 1.0 m (T) From lens surface. "ISO sensitivity: "Auto" Optical zoon changes range.	Flash Modes: Auto, Flash off, Flash on, Soft Flash, Red Eye Reduction Approximate Flash Range: [Normal] 0.15 to 4.2 m (W) / 0.6 to 1.9 m (T) Flash Continuous Shutter] 0.6 to 1.6 m (W) / 0.6 to 0.7 m (T) From lens surface. "ISO sensitivity: "Auto" "Optical zoom changes range.	Flash Modes: Auto, Flash off, Flash on, Soft Flash, Red Eye Reduction Approximate Flash Range: [Normal] 0.1 to 3.7 m (W) / 0.6 to 1.4 m (T) [Flash Continuous Shutter] 0.4 to 1.9 m (W) / 0.6 to 0.7 m (T) From lens surface. "ISO sensitivity: "Auto" Optical zoom changes range.	Flash Modes: Auto, Flash off, Flash on, Red Eye Reduction Approximate Flash Range: Normall 0.1 to 2.9 m (W) / 0.4 to 1.6 m (T) "From lens surface. "\$0 sonstivity: "Auto" "Optical zoom changes range.	Filash Modes: Auto, Filash off, Flash on, Red Eye Reduction Approximate Flash Range: [Normal] 0.15 to 2.8 m (W) / 0.4 to 1.5 m (T) From lens surface. "ISO sensitivity: "Auto" "Optical zoom changes range.
Playback Functions	Playback Zoom (8x), Multi-image Display, Calendar Screen, Red Eye Correction, Image Rotation, Resize, Trimming, Keystone Correction, Color Restoration, Slideshow, Layout Print	Playback Zoom (8x), Multi-image Display, Calendar Screen, Red Eye Correction, Image Rotation, Resize, Trimming, Keystone Correction, Color Restoration, Slideshow, Layout Print	Playback Zoom (8x), Multi-image Display, Calendar Screen, Red Eye Correction, Image Rotation, Resize, Trimming, Keystone Correction, Color Restoration, Slideshow, Layout Print	Playback Zoom (8x), Multi-image Display, Calendar Screen, Red Eye Correction, Image Rotation, Resize, Trimming, Keystone Correction, Color Restoration, Slideshow, Layout Print	Playback Zoom (8x), Multi-image Display, Calendar Screen, Red Eye Correction, Image Rotation, Resize, Trimming, Keystone Correction, Color Restoration, Slideshow, Layout Print	Playback Zoom (8x), Multi-image Display, Calendar Screen, Red Eye Correction, Image Rotation, Resize, Trimming, Keystone Correction, Color Restoration, Slideshow, Layout Print	Playback Zoom (8x), Multi-image Display, Image Rotation (Snapshots), Resize, Trimming, Slideshow	Playback Zoom (8x), Multi-image Display, Image Rotation (Snapshots), Resize, Trimming, Slideshow
	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp
File Format	AVI format, Motion JPEG, IMA-ADPCM (monaural)	AVI format, Motion JPEG, IMA-ADPCM (monaural)	AVI format, Motion JPEG, IMA-ADPCM (monaural)	AVI format, Motion JPEG, IMA-ADPCM (monaural)	AVI format, Motion JPEG, IMA-ADPCM (monaural)	AVI format, Motion JPEG, IMA-ADPCM (monaural)	AVI format, Motion JPEG, IMA-ADPCM (monaural)	AVI format, Motion JPEG, IMA-ADPCM (monaural)
Approximate Focus Range	Auto focus: 15 cm to ∞ (W) / Macro: 7 cm to 50 cm (W)* ⁵ (One step from widest setting) *From lens surface. *Optical zoom changes range.	Auto focus: 85 cm to ∞ (W) / Macro: 26 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 70 cm to ∞ (W) / Macro: 21 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 70 cm to ∞ (W) / Macro: 21 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 60 cm to ∞ (W) / Macro: 23 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 70 cm to ∞ (W) / Macro: 25 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 71 cm to ∞ (W) / Macro: 30 cm (W) *From lens surface. *Optical zoom changes range.	Auto focus: 2 m to ∞ (W) / Macro: 40 cm (W) *From lens surface. *Optical zoom changes range.
Other	Selectable Focus Frame, Key Customization, Monitor Screen Brightness Adjustment, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)	Selectable Focus Frame, Key Customization, Monitor Screen Brightness Adjustment, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)	Selectable Focus Frame, Key Customization, Monitor Screen Brightness Adjustment, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL	Selectable Focus Frame, Key Customization, Monitor Screen Brightness Adjustment, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)	Selectable Focus Frame, Key Customization, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)	Selectable Focus Frame, Selectable Menu Color, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)	Focus Frame Customization, Key Customization, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)	Key Customization, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)
	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector	USB (Hi-Speed USB compatible) / AV (NTSC / PAL compliant) connector	USB (USB compatible) / AV (NTSC / PAL compliant) connector
Power Source	Rechargeable Lithium Ion Battery (NP-90)	Rechargeable Lithium Ion Battery (NP-60)	Rechargeable Lithium Ion Battery (NP-40)	Rechargeable Lithium Ion Battery (NP-40)	Rechargeable Lithium Ion Battery (NP-80)	Rechargeable Lithium Ion Battery (NP-60)	Rechargeable Lithium Ion Battery (NP-82)	Rechargeable Lithium Ion Battery (NP-60)
Dimensions*2	102.5 (W) x 62 (H) x 24.3 (D) mm (22.1 mm at thinnest point)	94.2 (W) x 54.6 (H) x 14.9 (D) mm (13.8 mm at thinnest point)	96.9 (W) x 57.6 (H) x 21.4 (D) mm (19.5 mm at thinnest point)	96.9 (W) x 57.6 (H) x 23.0 (D) mm (21.1 mm at thinnest point)	98.2 (W) x 54.9 (H) x 20.1 (D) mm (19.6 mm at thinnest point)	89.7 (W) x 51.7 (H) x 19.4 (D) mm (17.8 mm at thinnest point)	94.1 (W) x 56.1 (H) x 18.1 (D) mm (17.4 mm at thinnest point)	92.5 (W) x 55.0 (H) x 23.2 (D) mm (20.4 mm at thinnest point)
Weight*3	Approximately 164 g	Approximately 112 g	Approximately 130 g	Approximately 131 g	Approximately 112 g	Approximately 102 g	Approximately 102 g	Approximately 125 g
Bundled Accessories	Rechargeable Lithium Ion Battery (NP-90), Battery Charger, AC Power Cord, Special USB Cable, Special AV Cable, Strap, CD-ROM	Rechargeable Lithium Ion Battery (NP-60), Battery Charger, AC Power Cord, Special USB Cable, Special AV Cable, Strap, CD-ROM	Rechargeable Lithium Ion Battery (NP-40), Battery Charger, AC Power Cord, Special USB Cable, Special AV Cable, Strap, CD-ROM	Rechargeable Lithium Ion Battery (NP-40), Battery Charger, AC Power Cord, Special USB Cable, Special AV Cable, Strap, CD-ROM	Rechargeable Lithium Ion Battery (NP-80), Battery Charger, AC Power Cord, Special USB Cable, Special AV Cable, Strap, CD-ROM	Rechargeable Lithium Ion Battery (NP-60), Battery Charger, AC Power Cord, Special USB Cable, Special AV Cable, Strap, CD-ROM	Rechargeable Lithium Ion Battery (NP-82), Battery Charger, AC Power Cord, Special USB Cable, Strap, CD-ROM	Rechargeable Lithium Ion Battery (NP-60), Battery Charger, AC Power Cord, Special USB Cable, Special AV Cable, Strap, CD-ROM
	*1. SOS: Standard Output Sensitivity. REl: Recommended Exposure Index. *2. Excluding projections *3. Excluding battery and bundled accessories *4. built-in memory capacity after formatting. *5. Auto Focus is performed before recording starts, and is fixed during recording.							

PECIFICATION	EXILIM ZOOM		
CHART	EX-Z2		
Number of Effective Pixels	Approximately 12.1 megapixels		
Image Sensor	1/2.3-inch square pixel CCD (Total pixels: 12.39 megapixels)		
Monitor Screen	2.7-inch wide TFT color LCD / 114,960 dots (479 x 240)		
File Format	Snapshots: JPEG (Exif Ver. 2.2), DCF 1.0 standard, DPOF compliant Audio (Voice Recording): WAV (monaural)		
Recording Media	17.8 MB* ⁴ built-in flash memory, SD Memory Card, SDHC Memory Card		
Number of Recorded Pixels (Snapshots)	4,000 x 3,000 / 4,000 x 2,656 (3:2) / 4,000 x 2,240 (16:9) / 3,264 x 2,448 / 2,560 x 1,920 / 2,048 x 1,536 / 640 x 480 (VGA)		
Lens / Focal Length	6 lenses in 5 groups, including aspherical lens; F3.1 (W) to F5.6 (T) (Approximately 35.5 to 106.5 mm equivalent to 35 mm film)		
Zoom	3x optical zoom, 4x digital zoom, maximum 18.7x HD zoom (with VGA size)		
Focus	Type: Contrast Detection Auto Focus • Mode: Auto Focus, Macro, Pan Focus, Infinity, Manual Focus • AF Area: Spot, 9-point multi • Focus Lock		
Approximate Focus Range (Snapshots)	Auto focus: 40 cm to ∞ (W) / Macro: 10 cm to 50 cm (W) *From lens surface. *Optical zoom changes range.		
Exposure	Metering: Multi pattern, Center Weighted, Spot by CCD Control: Program AE Compensation: -2 EV to +2 EV (in 1/3 EV steps)		
Aperture	F3.1 (W) to F7.8 (W) *With ND filter. *Optical zoom changes aperture value.		
Recording Functions	Face Detection, Normal-speed Continuous Shutter, Auto Macro (Full wide-angle only), BEST SHOT, Snapshot In Movie, Voice Recording, easy Mode		
Shutter Type / Shutter Speed	CCD shutter, mechanical shutter • Auto (Program AE): 1/2 to 1/2000 second • Night Scene: 4 seconds maximum *May differ due to camera setup.		
White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual White Balance		
Sensitivity (SOS / REI)*1	Auto, ISO64, ISO100, ISO200, ISO400, ISO800, ISO1600		
Self-timer	10 seconds or 2 seconds, Triple Self-timer		
Built-in Flash	Flash Modes: Auto, Flash off, Flash on, Red Eye Reduction Approximate Flash Range: [Normal] 0.1 to 2.9 m (W) / 0.5 to 1.6 m (T) From lens surface. "ISO sensitivity: "Auto" "Optical zoom changes range.		
Playback Functions	Playback Zoom (8x), Multi-image Display, Image Rotation (Snapshots), Resize, Trimming, Slideshow		
Timekeeping Functions	Date and time (Current date and time are stored with image data), Auto calendar up to 2049, Timestamp		
File Format	AVI format, Motion JPEG, IMA-ADPCM (monaural)		
Approximate	Auto focus: 2 m to ∞ (W) / Macro: 40 cm (W) *From lens surface. *Optical zoom changes range.		
≦ Focus Range	Selectable Focus Frame, Selectable Menu Color, Key Customization, PictBridge, Video Outout (NTSC / PAL).		
Other	Key Customization, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)		
	I Kev Customization. PictBridge. Video Output (NTSC / PAL).		
Other	Key Customization, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL)		
Other Input / Output Terminals	Key Customization, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL) USB (USB compatible) / AV (NTSC / PAL compliant) connector		
Other Input / Output Terminals Power Source	Key Customization, PictBridge, Video Output (NTSC / PAL), Wide-screen TV Output (NTSC / PAL) USB (USB compatible) / AV (NTSC / PAL compliant) connector Rechargeable Lithium Ion Battery (NP-80)		

Number of Snapshots / File Sizes (Actual values depend on recording conditions), Movie Recording Time Image sizes are the maximum and minimum for each model.

Snapshots EX-FC100

	Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GE
		Fine	5.66 MB	170 shots
	3,456 x 2,592 (9M)	Normal	3.0 MB	322 shots
		Economy	2.02 MB	478 shots
		Fine	330 KB	2,929 shots
	640 x 480 (VGA)	Normal	190 KB	5,086 shots
		Economy	140 KB	6,903 shots

Movies EX-FC100	HD supports monaural audio, HS does not support audio.		
Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB	
1,280 x 720 (HD)	30 M bits/second (30 fps)	4 minutes and 22 seconds	
224 x 64 (HS 1000)	25 M bits/second (1000 fps)	5 minutes and 14 seconds	
224 x 168 (HS 420)	50 M bits/second (420 fps)	2 minutes and 38 seconds	
480 x 360 (HS 210)	50 M bits/second (210 fps)	2 minutes and 38 seconds	

• Snapshots EX-FS10

	Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GB)
		Fine	5.66 MB	170 shots
	3,456 x 2,592 (9M)	Normal	3.0 MB	322 shots
		Economy	2.02 MB	478 shots
	640 x 480 (VGA)	Fine	330 KB	2,929 shots
		Normal	190 KB	5,086 shots
		Economy	140 KB	6,903 shots

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- INIOVIES EX-1310		TID supports monadrar addio, 115	does not support addio.	
	Image Size (Pixels) Approximate Data Rate (Frame Rate)		Approximate Recording Time for SD Memory Card 1GB	
	1,280 x 720 (HD)	30 M bits/second (30 fps)	4 minutes and 22 seconds	
	224 x 64 (HS 1000)	25 M bits/second (1000 fps)	5 minutes and 14 seconds	
	224 x 168 (HS 420)	50 M bits/second (420 fps)	2 minutes and 38 seconds	
	480 x 360 (HS 210)	50 M bits/second (210 fps)	2 minutes and 38 seconds	

• Snanshots FX-F1

	- Silapsilots Ex-F			
	Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GB)
		Fine	3.48 MB	277 shots
	2,816 x 2,112 (6M)	Normal	1.89 MB	511 shots
		Economy	1.3 MB	743 shots
		Fine	330 KB	2,930 shots
	640 x 480 (VGA)	Normal	190 KB	5,090 shots
		Economy	140 KB	6.908 shots

• Movies EX-F1 HD supports monaural audio, HS does not support audio.

Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB
1,920 x 1,080 (FHD)	14 M bits/second (60 fields/second)	9 minutes and 11 seconds
336 x 96 (HS 1200)	18 M bits/second (1200 fps)	7 minutes and 18 seconds
432 x 192 (HS 600)	18 M bits/second (600 fps)	7 minutes and 19 seconds
512 x 384 (HS 300)	18 M bits/second (300 fps)	7 minutes and 19 seconds

• Snapshots EX-FH20

	Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GB
		Fine	5.66 MB	170 shots
	3,456 x 2,592 (9M)	Normal	3.0 MB	322 shots
		Economy	2.02 MB	478 shots
	640 x 480 (VGA)	Fine	330 KB	2,930 shots
		Normal	190 KB	5,090 shots
		Economy	140 KB	6,908 shots

Movies EX-FH20	HD supports monaural audio, HS	does not support audio.
Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB
1,280 x 720 (HD)	30 M bits/second (30 fps)	4 minutes and 22 seconds
224 x 56 (HS 1000)	25 M bits/second (1000 fps)	5 minutes and 14 seconds
224 x 168 (HS 420)	50 M bits/second (420 fps)	2 minutes and 38 seconds
480 x 360 (HS 210)	50 M bits/second (210 fps)	2 minutes and 38 seconds

• Snapshots EX-H10

	Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GE
		Fine	7.87 MB	122 shots
	4,000 x 3,000 (12M)	Normal	4.13 MB	234 shots
		Economy	2.76 MB	350 shots
		Fine	330 KB	2,928 shots
	640 x 480 (VGA)	Normal	190 KB	5,084 shots
		Economy	140 KB	6,900 shots

Movie With Audio FX-H10

· INIOVIE WITH Addit		
Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB
HD 1,280 x 720 24 M bits/second (24 fps)		5 minutes and 27 seconds
STD 640 x 480	10 M bits/second (30 fps)	13 minutes and 10 seconds
LP 320 x 240	2.7 M bits/second (15 fps)	49 minutes and 36 seconds

• Snapshots EX-S12

	Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GE
		Fine	7.87 MB	122 shots
	4,000 x 3,000 (12M)	Normal	4.13 MB	234 shots
		Economy	2.76 MB	350 shots
	640 x 480 (VGA)	Fine	330 KB	2,928 shots
		Normal	190 KB	5,084 shots
		Economy	140 KB	6,900 shots

Movie With Audio EX-S12

Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB	
HD 1,280 x 720	24 M bits/second (24 fps)	5 minutes and 27 seconds	
STD 640 x 480	10 M bits/second (30 fps)	13 minutes and 10 seconds	
LP 320 x 240	2.7 M bits/second (15 fps)	49 minutes and 36 seconds	

• Snapshots EX-Z450

	Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GB)
		Fine	7.87 MB	122 shots
	4,000 x 3,000 (12M)	Normal	4.13 MB	234 shots
		Economy	2.76 MB	350 shots
	640 x 480 (VGA)	Fine	430 KB	2,247 shots
		Normal	290 KB	3,331 shots
		Economy	240 KB	4,025 shots

Movie With Audio EX-Z450

	Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB
	HD 1,280 x 720	24 M bits/second (24 fps)	5 minutes and 27 seconds
	STD 640 x 480	10 M bits/second (30 fps)	13 minutes and 10 seconds
LP 320 x 240 2.7 M b		2.7 M bits/second (15 fps)	49 minutes and 36 seconds

• Snapshots EX-Z400

	Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GB
	4,000 x 3,000 (12M)	Fine	7.87 MB	122 shots
		Normal	4.13 MB	234 shots
		Economy	2.76 MB	350 shots
	640 x 480 (VGA)	Fine	330 KB	2,928 shots
		Normal	190 KB	5,084 shots
		Economy	140 KB	6,900 shots

Movie With Audio EX-Z400

Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB		
HD 1,280 x 720	24 M bits/second (24 fps)	5 minutes and 27 seconds		
STD 640 x 480	10 M bits/second (30 fps)	13 minutes and 10 seconds		
LP 320 x 240	2.7 M bits/second (15 fps)	49 minutes and 36 seconds		

Snapshots EX-Z280

	Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GB
	4,000 x 3,000 (12M)	Fine	7.87 MB	122 shots
		Normal	4.13 MB	234 shots
		Economy	2.76 MB	350 shots
	640 x 480 (VGA)	Fine	330 KB	2,928 shots
		Normal	190 KB	5,084 shots
		Economy	140 KB	6,900 shots

Movie With Audio EX-Z280

Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB
HD 1,280 x 720	24 M bits/second (24 fps)	5 minutes and 27 seconds
STD 640 x 480	10 M bits/second (30 fps)	13 minutes and 10 seconds
LP 320 x 240	2.7 M bits/second (15 fps)	49 minutes and 36 seconds

• Snapshots EX-Z90

1	Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GB)
		Fine	7.87 MB	122 shots
	4,000 x 3,000 (12M)	Normal	4.13 MB	234 shots
ı		Economy	2.76 MB	350 shots
-	640 x 480 (VGA)	Fine	430 KB	2,247 shots
ı		Normal	290 KB	3,331 shots
		Economy	240 KB	4,025 shots

Movie With Audio EX-Z90

Image Size (Pixels) Approximate Data Rate (Frame Rate)		Approximate Recording Time for SD Memory Card 1GB
HD 1,280 x 720 24 M bits/second (24 fps)		5 minutes and 27 seconds
STD 640 x 480	10 M bits/second (30 fps)	13 minutes and 10 seconds
LP 320 x 240	2.7 M bits/second (15 fps)	49 minutes and 36 seconds

• Snapshots EX-Z33

Shapshots Ext 200			
Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GB)
	Fine	6.4 MB	150 shots
3,648 x 2,736 (10M)	Normal	3.38 MB	285 shots
	Economy	2.27 MB	425 shots
	Fine	330 KB	2,928 shots
640 x 480 (VGA)	Normal	190 KB	5,085 shots
	Economy	140 KB	6,902 shots

Movie With Audio FX-733

World With Addio EX-255			
Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB	
WIDE 848 x 480	12.5 M bits/second (30 fps)	10 minutes and 8 seconds	
STD 640 x 480	10.6 M bits/second (30 fps)	11 minutes and 43 seconds	
LP 320 x 240	2.7 M bits/second (15 fps)	46 minutes and 53 seconds	

• Snapshots EX-Z2

Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GB)
	Fine	7.87 MB	122 shots
4,000 x 3,000 (12M)	Normal	4.13 MB	233 shots
	Economy	2.76 MB	350 shots
	Fine	330 KB	2,928 shots
640 x 480 (VGA)	Normal	190 KB	5,085 shots
	Economy	140 KB	6,902 shots

Movie With Audio EX-Z2

Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB
WIDE 848 x 480	12.5 M bits/second (30 fps)	10 minutes and 8 seconds
STD 640 x 480	10.6 M bits/second (30 fps)	11 minutes and 43 seconds
LP 320 x 240	2.7 M bits/second (15 fps)	46 minutes and 53 seconds

• Snapshots EX-Z29

Image Size (Pixels)	Image Quality	Approximate File Size	SD Memory Card (1GB)
	Fine	6.4 MB	150 shots
3,648 x 2,736 (10M)	Normal	3.38 MB	285 shots
	Economy	2.27 MB	425 shots
	Fine	330 KB	2,928 shots
640 x 480 (VGA)	Normal	190 KB	5,085 shots
	Economy	140 KB	6,902 shots

Movie With Audio EX-Z29

Image Size (Pixels)	Approximate Data Rate (Frame Rate)	Approximate Recording Time for SD Memory Card 1GB	
WIDE 848 x 480	12.5 M bits/second (30 fps)	10 minutes and 8 seconds	
STD 640 x 480	10.6 M bits/second (30 fps)	11 minutes and 43 seconds	
LP 320 x 240	2.7 M bits/second (15 fps)	46 minutes and 53 seconds	

OPTION

Rechargeable Lithium Ion Battery

• NP-100 (EX-F1 only)

• NP-90 (EX-H10 only)

NP-80 (EX-Z280 / EX-Z33 / EX-Z2 only)

• NP-60 (EX-FS10 / EX-S12 / EX-Z90 / EX-Z29 only)

• NP-40 (EX-FC100 / EX-Z450 / EX-Z400 only)

AC Adaptor

AD-C100 (EX-F1 / EX-FH20 only)

 Each movie can be up to 10 minutes long. • All of the above values are approximate and are presented for reference only. • SD Memory Card values are based on Panasonic PRO HIGH SPEED 1 GB SD Memory Card. Actual capacity depends on the card manufacturer. • The SD memory card is available separately. • When using a memory card with a different capacity than noted above, calculate approximate capacity by multiplying the values here by the appropriate percentage.

*1. SOS: Standard Output Sensitivity. REI: Recommended Exposure Index. *2. Excluding projections *3. Excluding battery and bundled accessories *4. Built-in memory capacity after formatting. *5. Auto Focus is performed before recording starts, and is fixed during recording.

Designs and specifications are subject to change without notice. The printing process may cause colors to differ somewhat from those of the actual product.

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